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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,187

12/22/2005

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GJ-272J

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EXAMINER

MA, TIZE

ART UNIT

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2628

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,187	Applicant(s) NEALE ET AL.	
	Examiner TIZE MA	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/22/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites “secondary image source is of a different *geographical* configuration to the primary image source”. The ambiguity of the language makes the claim indefinite. The phrase “different geometrical configuration” appears on page 4, paragraph 1 of the specification. The examiner suspects that “different *geographical* configuration” in the claim might be meant by “different geometrical configuration”. Therefore for claim interpretation, the term “different geometrical configuration” is used.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

Art Unit: 2628

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-7, 11, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazess et al (US. 6,282,261 B1, already of the record), and in view of Margulis (US. Pub. 2002/0063807 A1).

4. Regarding claim 1, Mazess et al teaches image display apparatus for displaying composite images (column 2, lines 37-39, the image correction circuit allows the multiple images to be seamlessly blended together.), which image display apparatus comprises a primary image source (Fig. 37, 504), at least one secondary image source (Fig. 37, 504), first distortion means for distorting the image geometry of the secondary image source such that the image geometry of the secondary image source matches that of the primary image source (column 23, lines 41-49, correcting distortions before combining. Distorting an image and correcting distortion of an image are technically equivalent since both just transform the geometry of the image.) , combining means for combining images from the primary image source with the distorted images from the secondary image source (column 23, lines 53-63, combining the modified images), and display means for displaying the composite images (Fig. 6, 18, display).

5. However, Mazess et al does not teach second distortion means for distorting the composite images. That is, Mazess et al does not teach distorting the composite images just before displaying.

Art Unit: 2628

6. Margulis teaches distorting the composite images before just before displaying for solving the problems related to a curved screen projection (paragraph [0081], combining multiple camera views; then paragraph [0082], solving problems related to a curved screen projection; then paragraph [0085], advanced transitions involving warping/distorting.).

7. It would have been obvious to one of ordinary skills in the art at the time of the invention to include a second distortion means for distorting the composite images before displaying the composite images in the apparatus as shown in Mazess et al in case the composite images being displayed on a curved screen projection.

8. Regarding claim 2, Mazess et al teaches that the display means is a single-channel display means (Fig. 6, an ordinary display going with a computer).

9. Regarding claim 3, Margulis teaches that the display means is a multi-channel display means (paragraph [0084], multiple screen systems).

10. Regarding claims 4 and 5, Mazess et al and Margulis do not explicitly teach that the multi-channel display means is a multi-channel display means with adjacent channels having edges that are butted; or the multi-channel display means is a multi-channel display means in which adjacent channels are blended. However, Margulis teaches various similar special effects, like fades and blends (paragraph [0085]).

11. Regarding claim 6, Mazess et al teaches that the display means has a flat display surface (Fig. 6, 18, monitor. Flat surface, like LCD screen, is common.) .

12. Regarding claim 7, Margulis teaches that the display means has a curved display surface (paragraph [0077]).

Art Unit: 2628

13. Regarding claim 11, Mazess et al teaches secondary image source is of a different geographical (geometrical) configuration to the primary image source. The examiner treats “different geographical configuration” as “different geometrical configuration”. The geometrical configuration of an image includes size, shape, position, etc. In Fig. 37 of Mazess et al, the input images are positioned differently.

14. Regarding claim 13, Mazess et al teaches that there are at least two of the secondary image sources, and in which each secondary image source undergoes the same degree of distortion prior to be combined with the primary image from the primary image source (Fig. 37, 504, three or more image sources. Some of them would undergo the same degrees of distortions.) .

15. Regarding claim 14, Mazess et al teaches that there are at least two of the secondary image sources, and in which each secondary image source undergoes different distortion prior to be combined with the primary image from the primary image source (Fig. 37, 504, three or more image sources. Some of them would undergo the different degrees of distortions.) .

16. Claims 8-10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazess et al and in view of Margulis as applied to claim 1 above, and further in view of Guckenberger et al (US. Pub. 2002/0180727 A1).

17. Regarding claims 8-9, the combination of Mazess et al and Margulis remains as applied to claim 1 above. However, the combination does not teach that the display means has a cylindrical display surface, or the display means has a spherical display surface.

Art Unit: 2628

18. Guckenberger et al teaches displays with cylindrical or spherical display surfaces (paragraphs [0070]-0072], toroidal and spherical display surfaces. Part of a toroidal surface can be approximately treated as cylindrical). The curved display surface provides certain degree of surrounding view for the viewers.

19. It would have been obvious to one of ordinary skills in the art at the time of the invention to combine the apparatus in the combination of Mazess et al and Margulis with Guckenberger et al to include curved display surfaces, such as cylindrical or spherical, for surrounding view for the viewers.

20. Regarding claims 10 and 12, the combination of Mazess et al and Margulis remains as applied to claim 1 above. However, the combination does not teach that the primary image source is a computer generated image source, or the secondary image source is a computer generated image source.

21. Guckenberger et al teaches combining computer generated images (paragraph [0029], composited image of digitally generated images) for training simulation system. Computer (or digitally) generated images are commonly used for illustrations and animations.

22. It would have been obvious to one of ordinary skills in the art at the time of the invention to combine the apparatus in the combination of Mazess et al and Margulis with Guckenberger et al to combine computer generated images with other images since the computer generated images are common source of the images.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIZE MA whose telephone number is (571)270-3709. The examiner can normally be reached on Mon-Fri 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao M. Wu can be reached on 571-272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

tm

/XIAO M. WU/

Supervisory Patent Examiner, Art Unit 2628